ABSTRACT

A method for treating an area of a semiconductor wafer surface with a laser for reducing stress concentrations is disclosed. The wafer treatment method discloses treating an area of a wafer surface with a laser beam, wherein the treated area is ablated or melted by the beam and re-solidifies into a more planar profile, thereby reducing areas of stress concentration and stress risers that contribute to cracking and chipping during wafer singulation. Preferably, the treated area has a width less than that of a scribe street, but wider than the kerf created by a wafer dicing blade. Consequently, when the wafer is singulated, the dicing blade will preferably saw through treated areas only. It will be understood that the method of the preferred embodiments may be used to treat other areas of stress concentration and surface discontinuities on the wafer, as desired.